

Docket No. 60,426-268 (97P7720US03)

REMARKS

Claims 36-73 remain in the application including independent claims 36, 39, 41, 49, and 56. Claims 36-40 have been copied from U.S. Patent No. 6,039,344. Claims 56 and 57 are indicated as allowable if rewritten in independent form. Claim 56 has been so amended. Thus, claims 56-57 should now be in condition for allowance.

Claims 36-55 and 58-73 stand rejected under 35 U.S.C. 103(a) as being unpatentable over published Research Disclosure 39916 in view of Gagnon 5,810,392. Claim 41 is directed to a weight sensing apparatus for a vehicle seat that includes a plurality of sensors each including a mounting portion for attachment to a vehicle seat structure and a deflectable portion that deflects in response to a weight force applied to the vehicle seat structure to generate a weight signal, and a controller for receiving the weight signals from the sensors to determine seat occupant weight.

The examiner argues that the research disclosure teaches the use of four load cells positioned at the four corners of a seat pan where signals from the load cells are used to determine total weight of the seat occupant. The examiner admits that the research disclosure does not teach the use of sensors that are strain gages and relies on Gagnon to teach this feature. Further, the examiner admits that the neither reference teaches the use of a sensor having a deflectable portion but argues that since Gagnon teaches that each sensor can be a strain gage, it is "known that common strain gauges require a deflectable member for holding the gage itself." Thus, the examiner is arguing that it would be obvious to use the strain gages mounted on deflectable mounting structures as taught by Gagnon in place of the load cells used in the system described by the research disclosure.

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Applicant respectfully disagrees. Gagnon does not teach mounting any type of sensor to a deflectable portion. While Gagnon does state that each sensor could be a load cell, strain gauge, or variable resistance pressure sensor, there is no teaching of how a strain gauge or variable resistance pressure sensor would be mounted within the seat structure to generate signals. The only teaching in Gagnon of how a sensor is mounted within the seat structure relates to a load cell. It is clear from Figure 10 that load cell 20 could not simply be replaced with a strain gauge because the strain gauge would be crushed and rendered inoperable once an occupant weight force is applied to the seat. There is no teaching anywhere in Gagnon as to how the load cell sensor mounting structure would be redesigned to accommodate a strain gauge sensor. The research disclosure also does not teach a sensor mounting structure that could accommodate a strain gauge on a deflectable portion. The only teaching of a sensor mounting configuration capable of supporting sensors on a deflectable portion for measuring occupant weight is found in Applicant's own disclosure.

Further, there is no motivation or suggestion to modify the research disclosure system with the teachings of Gagnon. Both the research disclosure and Gagnon use load cells to determine seat occupant weight. The examiner has pointed to no teaching in Gagnon of any particular benefit to be derived from using a strain gauge, especially since the entire disclosure and all of the drawings are directed to a load cell. In addition, there is nothing in the research disclosure, which would have led one of ordinary skill in the art to believe that the research disclosure system was in any way deficient for the research disclosure system's purposes or was in need of modification. If one of ordinary skill in the art were to modify the research disclosure system, the modification would clearly be

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utilizing the specific load cell mounting configuration taught by Gagnon to install the load cells in the research disclosure system. One of ordinary skill in the art would have found no reason, suggestion, or incentive for attempting to replace the load cell sensors of the research disclosure with sensors mounted on deflectable portions to measure strain, as claimed by Applicant, other than through the luxury of hindsight of one who first viewed Applicant's disclosure. This is not the proper basis for a rejection under 35 U.S.C. 103(a).

Also, several of the features in the dependent claims are also not disclosed or taught by the research disclosure and Gagnon. For example, claim 45 includes the features of each sensor having a mounting portion for attachment to a seat pan, a deflectable portion that deflects in response to a weight force applied to the vehicle seat structure to generate a weight signal, and a support portion mounted to a vehicle seat track member such that the deflectable portion is positioned between the mounting and support portions where at least one strain gage is mounted to the deflectable portion of each of the sensors.

As discussed above, while Gagnon disclose that a strain gauge or load cell could be used, there is no teaching in Gagnon or the research disclosure of how to mount the strain gauge to a sensor so that an accurate weight signal can be generated. Applicant's sensor utilizes a unique sensor that includes a mounting portion attached to a seat pan, a support portion mounted to a seat track, and a deflectable portion positioned between the mounting and support portions that supports the strain gauge. The examiner argues that it is known that strain gauges require a deflectable member but does not explain how this deflectable member is incorporated into a seat structure to measure seat occupant weight.

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The only teaching of this feature is found in Applicant's disclosure, which cannot be used as motivation or suggestion to make the modification to the research disclosure system.

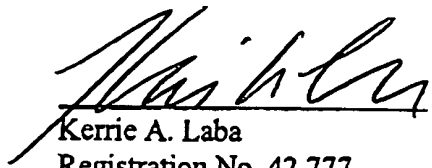
Claim 43 includes the feature of the strain gage comprising a plurality of strain gages that are mounted in a predetermined spaced relationship to each other on the deflectable portion. Again, there is no teaching of using any type of strain gage on a deflectable portion of a sensor and there is certainly no teaching of using a plurality of strain gages that are mounted in a predetermined spaced relationship.

Finally, the examiner has ignored the features set forth in claims 58-73. Applicant respectfully requests an indication of where in either Gagnon or the research disclosure the features of claims 58-73 are taught.

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The Commissioner is authorized to charge Deposit Account No. 50-1482, in the name of Carlson, Gaskey & Olds for adding an independent claim. It is believed that no additional fees are due, however, the Commissioner is authorized to charge Deposit Account No. 50-1482, in the name of Carlson, Gaskey & Olds, for any additional fees or credit the account for any overpayment.

Respectfully submitted,

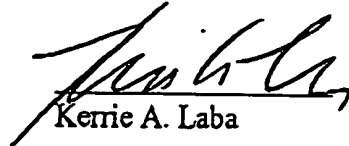


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CERTIFICATE OF TRANSMISSION UNDER 37 CFR 1.8

I hereby certify that this correspondence is being facsimile transmitted to the United States patent and Trademark Office, fax number (703) 305-7687, on June 21, 2003.



Kerrie A. Laba